40. The apparatus of claim 39 wherein said processor evaluates fuzzy inference rules relating to the rate of change of said respiratory effort signal.

att B8

REMARKS

No new matter is added to the application as a result of the foregoing amendments. Early and favorable examination is therefore requested.

Respectfully submitted,
GOTTLIEB, RACKMAN & REISMAN, P.C.
Attorneys for Applicant
270 Madison Avenue
New York, New York 10016
Phone: (212) 684-3900
Fax: (212) 684-3999

1/15/02
Date

Raymond B. Churchill, Jr. (Reg. No. 44,617)

S:\raymond\amendments\Resmed10-US1.doc

APPENDIX A

(marked-up version of claim amendments)

2. (AMENDED) The method of claim 1 wherein said respiratory effort sensor is selected from a group of effort sensors ~~comprising~~including:

(a) a suprasternal notch sensor;

(b) an esophageal pressure effort sensor; and

(c) an electromyograph.

16. (AMENDED) The method of claim 6 wherein said fuzzy inference rules include at least one rule selected from a group of rules ~~comprising~~including:

(a) If the airflow is zero and increasing fast, then the phase is about 0 revolutions;

(b) If the airflow is large positive and steady, then the phase is about 0.25 revolutions;

(c) If the airflow is zero and falling fast, then the phase is about 0.5 revolutions;

(d) If the airflow is large negative and steady, then the phase is about 0.75 revolutions;

(e) If the airflow is zero and steady and the 5-second low-pass filtered absolute value of the respiratory airflow is large, then the phase is about 0.9 revolutions;

(f) If the airflow is positive and the phase is expiratory, then the phase is about 0.1 revolutions;

(g) If the airflow is negative and the phase is inspiratory, then the phase is about 0.6 revolutions;

(h) If the 5-second low-pass filtered absolute value of the respiratory airflow is small, then the phase in the respiratory cycle is increasing at a fixed rate equal to the patient's expected respiratory rate; and

(i) If the 5-second low-pass filtered absolute value of the respiratory airflow is large, then the phase in the respiratory cycle is increasing at a steady rate equal to the existing rate of change of phase, low-pass filtered with a time constant of 20 seconds.

18. (AMENDED) The apparatus of claim 17 wherein said at least one sensor is an effort sensor from a group of effort sensors ~~comprising~~including:

(a) a suprasternal notch sensor;

(b) an esophageal pressure effort sensor; and

(c) an electromyograph.

32. (AMENDED) The apparatus of claim 22 wherein said fuzzy inference rules include at least one rule selected form a group of rules ~~comprising~~including:

(a) If the airflow is zero and increasing fast, then the phase is about 0 revolutions;

(b) If the airflow is large positive and steady, then the phase is about 0.25 revolutions;

(c) If the airflow is zero and falling fast, then the phase is about 0.5 revolutions;

(d) If the airflow is large negative and steady, then the phase is about 0.75 revolutions;

(e) If the airflow is zero and steady and the 5-second low-pass filtered absolute value of the respiratory airflow is large, then the phase is about 0.9 revolutions;

(f) If the airflow is positive and the phase is expiratory, then the phase is about 0.1 revolutions;

(g) If the airflow is negative and the phase is inspiratory, then the phase is about 0.6 revolutions;

(h) If the 5-second low-pass filtered absolute value of the respiratory airflow is small, then the phase in the respiratory cycle is increasing at a fixed rate equal to the patient's expected respiratory rate; and

(i) If the 5-second low-pass filtered absolute value of the respiratory airflow is large, then the phase in the respiratory cycle is increasing at a steady rate equal to the existing rate of change of phase, low-pass filtered with a time constant of 20 seconds.

34. (AMENDED) The method of claim 33 wherein said respiratory effort sensor is selected from a group of effort sensors ~~comprising~~including:

(a) a suprasternal notch sensor;

(b) an esophageal pressure effort sensor; and

(c) an electromyograph.

38. (AMENDED) The apparatus of claim 37 wherein said at least one sensor is an effort sensor from a group of effort sensors ~~comprising~~including:

(a) a suprasternal notch sensor;

(b) an esophageal pressure effort sensor; and

(c) an electromyograph.